Transistor Electronics Corporation

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Box 1546
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CRT-IDI-4-68

02

Transistor Electronics Corporation

TWX 910-576-2860 • BOX 6191 MINNEAPOLIS, MINNESOTA 55424 • TELEPHONE (612) 941-1100

Dear Sir:

Your response to the announcement of our new Series 500 DATA-SCREEN Terminal (a CRT Display) is greatly appreciated.

You'll find a brief, but comprehensive description of this versatile input-output terminal on page 2 of the attached brochure. This description should answer your initial questions. If it does not, or if you wish more specific data related to your requirements, please fill out and return the postage paid card enclosed - or call direct! Our terminal systems applications engineers will give your request prompt and personal attention.

The brochure enclosed also describes TEC's complete line of information display and control assemblies, components and systems--a complete single source for man-machine communications equipment.

Thanks again for your interest in TEC.

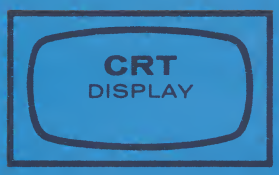
Sincerely,

TRANSISTOR ELECTRONICS CORPORATION

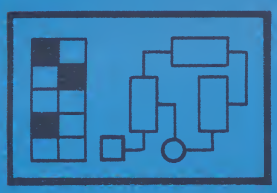
A. V. Klizas
General Marketing Manager

AVK:plh

Enclosure



DATA-SCREEN
DISPLAY TERMINAL



DATA·PANEL®
DISPLAY SYSTEMS

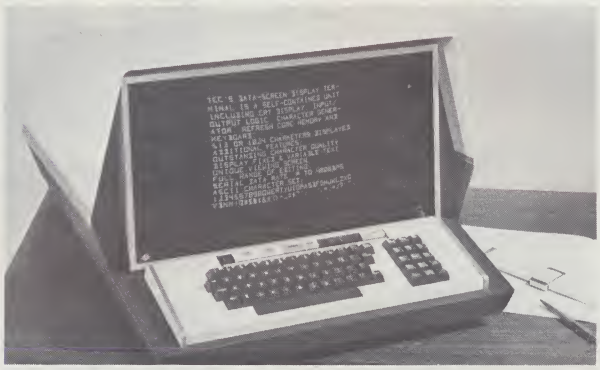
SOLID-STATE
ANNUNCIATOR
SYSTEMS

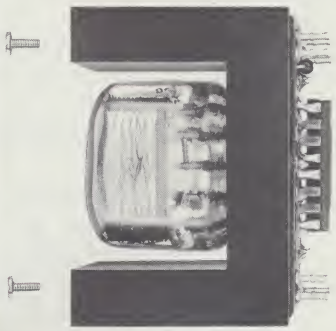
INDICATORS & SWITCHES

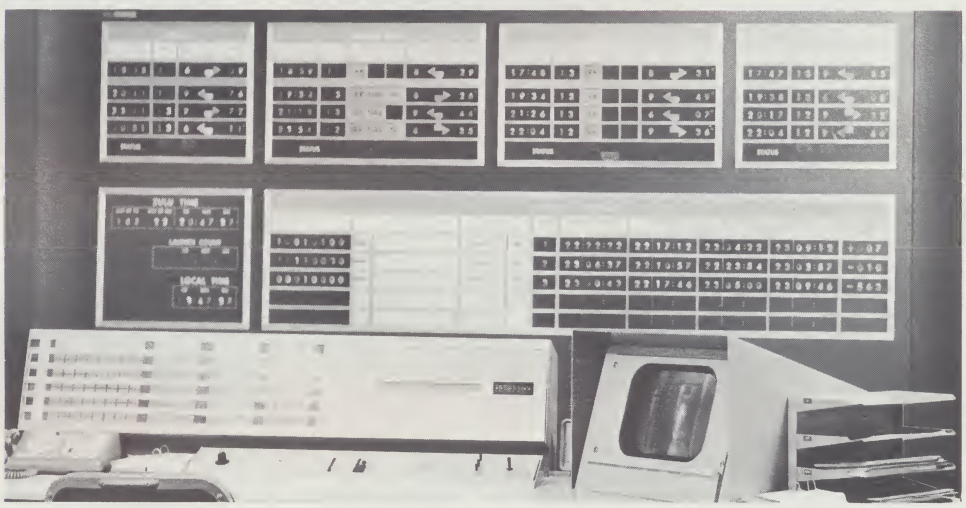
DATA-LINE
DISPLAY SYSTEMS

ELECTRONIC
KEYBOARD
SYSTEMS

DIGITAL
READOUT
DEVICES







TEC® DISPLAY & CONTROL

COMPONENTS . . . ASSEMBLIES . . . SYSTEMS

There is a practical solution to your information display and control problems . . . TEC's complete product line.

From this single source that is 100% involved in Man – Machine Interface, (M-MI) you can choose indicator lights, switches, readouts, custom built display panels or computer linked CRT display terminal systems.

Look to TEC, the leader and innovator for:

- Total Dedication to Display/Control
- Single Source – Complete M-MI Line
- Custom Designed Displays and Controls
- Problem Solving Application Engineering
- Display/Control Oriented Engineering
- Cost Saving Systems Interface Designs
- Originator, Patentee of Transistorized Indicators

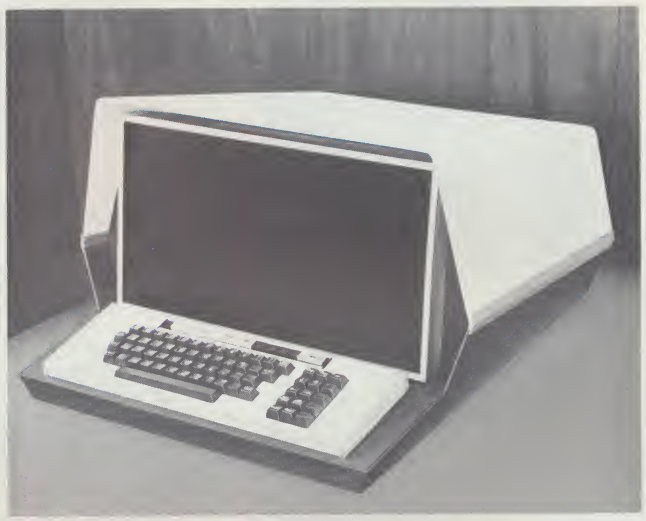
Transistor Electronics Corporation

SERIES 500
DATA-SCREEN TERMINAL

A GENERAL PURPOSE CRT DISPLAY TERMINAL

FEATURES

- 512 or 1000 characters in a compact stand-alone terminal
- Combines fixed message display areas with variable CRT display
- Full range of editing and text composition options
- Flexible interface capability with data transmission buffering
- Desk top, console or rack mounts in office or plant
- Detachable keyboard
- Modular design — more than 24 editing and control configurations available
- Synchronous transmission speed to 4800 bits per second
- Asynchronous operation optional with a wide range of transmission speeds available.



Displaying 512 or 1000 bold, bright, easily readable stroke written characters, TEC's DATA-SCREEN Display Terminal is completely self-contained, a stand alone terminal. It includes the CRT, input/output logic, character generator, refresh core memory and detachable electronic keyboard.

"Page" size CRT screen measures 8¾" wide x 6¾" high and presents 16 rows with 32 characters per row for the 512 character model and 50 characters per row, 20 rows, in the 1000 character model.

Interface versatility provides a terminal that operates either over communications circuits at serial rates to 4800 bits per second or via high speed parallel interface for direct computer access assuring compatibility with most computer systems.

TEC's DATA-SCREEN Display Terminal originated and features the concept that combines as many as 64 multi-color fixed message (annunciator) status displays with a CRT display. Both types of data appear behind a dark screen that greatly increases character contrast and readability.

TEC's low configuration enclosure features a detachable keyboard. For special mounting or packaging requirements the complete terminal will be supplied without enclosure to fit 19" rack or user's console or enclosure.

Editing Features: To provide maximum flexibility for operator and system interface, TEC offers extensive editing features in the DATA-SCREEN Display Terminal.

- Complete cursor manuverability.
- Line and character insert/delete functions aid text composition and editing.
- Character, line and screen erase functions are available as aids to text preparation.
- Repeat mode provides rapid entry of repetitive characters or symbols and speeds cursor positioning.
- Tab functions allow rapid formatting of special forms and text organization.
- Formatted and variable field text permits the operator to respond to formatted information by "filling-in the blanks".
- Non-significant spaces are stripped out prior to transmission, greatly reducing communications link traffic.
- Segmented transmission capability for conversational mode applications allows the operator and computer to converse while the remainder of the text remains unchanged.
- Transmission code security can utilize both horizontal parity (per character) as well as block checking (vertical block check) to insure detection of communications induced burst errors.

Selected combinations of these features allow TEC to offer DATA-SCREEN Display Terminals tailored to specific applications.

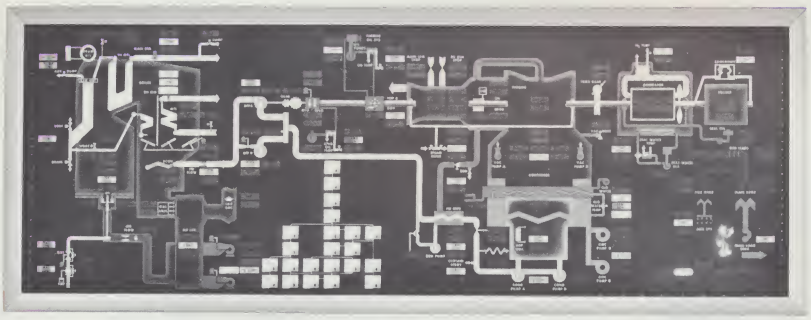
SPECIFICATIONS

Characters per display	512 or 1000
Characters per line	32 or 50
Lines per display	16 or 20
Character repertoire	64
Character code	ASCII standard
CRT Viewing Area	8¾" x 6¾"
Refresh rate	60 Hz Synchronous
Character generation	Continuous line, stroke method, 16 seg.
Brightness	37 foot lamberts, nominal
CRT deflection	Electro-magnetic, 90 degrees deflection

Cursor	Nondestructive, blinking
CRT Phosphor	P-4 standard
Storage method	Ferrite core memory
Keyboard	Attached or remote, ASCII coded
Communications Interface	EIA standard RS-232-B (or parallel)
Transmission Rate	Serial, synchronous, 2000 bits per second, 8 bit character format
Power	115 VAC, ±10%, 150 Watts, 60 Hz.
Size	23" W x 14½" H x 25" D
Operating Temperature	+10° C to +50° C

DATA·PANEL®
DISPLAY SYSTEMS

- COSTS LESS — integrated displays cost less per point than individual indicators.
- LABOR REDUCTION — your installation work may be cut 50% or more.
- RELIABLE — optimum use of I-C's lowers cost, increases reliability.
- MODULAR — designed to grow with your needs.
- INTERFACE — requires less computer or controlling logic in your system — cuts cabling costs too.
- ADAPTABLE — may be installed in consoles, racks or walls — no limit to size.
- FLEXIBLE — graphic, annunciator and readout displays may be combined for lowest cost system.
- VERSATILE — displays any message, any symbol in any size — in color.
- IMPACT — indications in off condition are invisible — visible off also offered.
- COMPLETE — functions as a total input/output system.



Large mimic/annunciator panel reports status of power generator system for Louisiana Power and Light Company.

DATA PANEL® Display Systems convey messages and symbols brilliantly and colorfully in a single viewing plane. If desired, only the vital "on" or illuminated messages can be seen. Permanently visible legends, symbols, grid lines and graphic mimics can be provided for optimum user application. TEC's industrial design consultants assist in selecting the most suitable display approach for a specific application.

DATA•PANEL® Display Systems, in addition to improving appearance and operator efficiency, actually reduce your display costs. They can be provided as complete, pre-wired assemblies, with lamp control & interface logic if desired, ready to mount in a single cutout and ready to connect, or simply as panels without electronics ready for wiring to terminals. DATA•PANEL® Display Systems can be custom designed for literally any display requirement and to operate in any environment.

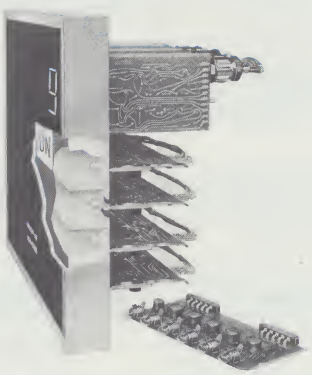
Maintenance of these displays is greatly simplified by placing all logic in one assembly. Installation and checkout costs are also reduced. DATA•PANEL® Display Systems are self supporting when mounted in a single panel cutout.

Solid State ANNUNCIATOR Systems

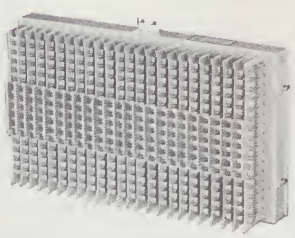
- Reliable solid state logic
- Smaller package, lower price, than competitive devices
- Visual indication of off-normal points
- Common audible and acknowledge features
- Interfaces with system alarm contacts

TEC's Annunciator Systems, a natural extension of DATA•PANEL® Display Systems, provide compact, high density alarm displays at a lower cost per point than similar competitive devices by integrating solid state annunciator logic into DATA PANEL® Display Systems. Flashing alarm indication is combined with audible alarm. Operator response to the problem turns off the audible alarm, but the indicator remains on steadily until the off-normal condition is corrected. Memory logic insures indication of passing alarms.

DATA • PANEL® Display Systems combine digital and alpha readouts and message displays behind a single plane panel. Replaceable lamps and logic cards (optional) are an integral part of the assembly.



Rear view of complete display panel ready for mounting and wiring to terminals. Use of common buss reduces lamp wiring by 50%.



Rear view of display panel complete with logic cards which have provision for edge connectors.

DATA•PANEL is a registered trade name of Transistor Electronics Corporation.

TRANSISTOR CONTROLLED INDICATORS

I-C COMPATIBLE: Virtually all models of Transistor Controlled Indicators shown on this page are available as M-Series — units designed to operate from the low level outputs of RTL, DTL and TTL I-C modules.

CUSTOM DESIGN: These cataloged devices can be custom designed to meet specific needs. TEC has 6000 special designs — electrical and mechanical — on file.

LOW VOLTAGE NEON INDICATOR LITE
LVN Series

Self-contained, transistorized circuitry of LVN Series operates from DC supply as low as 2 volts and internally generates high voltage AC to fire the neon lamp. Offers long lamp life and low power consumption. LVN Series indicators operate from 6 to 28 VDC supply and optionally can be controlled with signals as small as 2 volts. Spherical or flat top lens are available in five colors.

LVB Series — Adds integral isolated SPST-NO-DB, SPST-NC-DB and SPDT-DB switch options, activated by depressing button-lens.

TRANSISTORIZED MINI-LITE INDICATOR
MTL Series

Permanently wired, long life neon lamp is controlled from signals as low as 1.5 volt. A range of basic models are offered to meet typical signal and supply voltages. Like most TEC-LITE devices, the MTL Series is available for both discrete and integrated circuit systems. Flat tops or spherical lens options.

TBL Series — Adds isolated momentary switch with SPST-NO-DB, SPST-NC-DB or SPDT-DB options, activated by depressing button lens.

TRANSISTOR CONTROLLED INCANDESCENT LITE
WITH REPLACEABLE LAMP
TIL Series

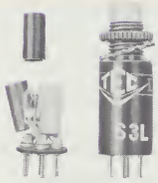
Incandescent lamp is internally switched on and off by signals as low as .3 ma. Standard midget flange base lamp is easily replaced by removing lens. Incandescent lamp lens available in 13 colors. High voltages are confined to the indicator itself.

TIB Series — Adds isolated momentary switch with SPST-NO-DB, SPST-NC-DB or SPDT-DB options, activated by depressing button-lens.

SOLID STATE MEMO-LITE®
WITH REPLACEABLE INCANDESCENT LAMP
TML-10 Series

An indicator with memory, turns on with signals as small as 2 microseconds at .5 ma. Its replaceable lamp remains on when the signal is removed. Lamp is turned off by interrupting supply or, in reset and press-test model, by depressing the button lens. Integral isolated SPST-NO-DB, SPST-NC-DB or SPDT-DB switch is available. TML-10 Series is designed for error indication, alarm actuation and can function as a logic element in systems.

SUBMINIATURE
INDICATORS AND SWITCHES



SUBMINIATURE TRI-LITE INDICATOR
S3L Series

ACTUAL SIZE

This extremely small indicator offers three separate color indications; red, green, and amber. Ideal for use where a large number of indications are required in a limited amount of space. Three rugged long-life incandescent lamps with color filter boots are permanently wired in a .360'' diameter by .600'' long body.

SUBMINIATURE BUTTON-LITE
SBL Series

ACTUAL SIZE

Extremely small, the SBL Series Button Switch is designed for use in display and control panels where space is at a premium. The body diameter of the SBL Series is .360°° and the back panel projection is only 9/16°° including terminals. Lamp options are incandescent or permanently wired, long-life T-1 type neon. Integral switch has a SPST-NO-DB action.

SUBMINIATURE BUTTON SWITCH
SBS Series

ACTUAL SIZE

This extremely small push-button switch is only .360°° in diameter and back panel projection is only .468°°. SPST-NO-DB momentary contact switch has a life of 1,000,000 operations at 100 ma at 115 VAC.

SUBMINIATURE DISPLAY LITE
WITH INCANDESCENT OR NEON LAMP

ACTUAL SIZE

SDL Series

Front mounted for use where panel space is limited or where indications must be small such as decimal points. Mounts on 1/4°° centers horizontally or vertically. Only .240°° diameter. Choice of connector hook-up or insulated wire leads.

SUBMINIATURE INDICATOR LITE
WITH NEON OR INCANDESCENT LAMP

ACTUAL SIZE

SIL Series

Rugged, long life T-1 incandescent or neon lamp is permanently mounted in an extremely small body that is .360°° in diameter and only .250°° long. Ideal for applications where panel space is limited and many indications are required.

SUBMINIATURE INDICATORS
WITH NEON OR INCANDESCENT LAMP

ACTUAL SIZE

STL Series

An extremely small display lite controlled from low-level signals. Lamp, transistor and related circuitry are packaged in a .360°° diameter by .600°° long body. Available with permanently wired, T-1 type neon or incandescent lamp. For applications where many indications are needed in a small area.

REPLACEABLE CARTRIDGE LITE

WITH INCANDESCENT OR NEON LAMP

RCL SERIES

RCLH SERIES

Replaceable Cartridge Lites feature neon or incandescent lamps, four lens styles and ten lens colors. Individually mountable, or, ideally, mounted in the RCLH Series Cartridge Lite Holder that permits fast, simple cartridge replacement.

REPLACEABLE LAMP DISPLAY LITE

RDL Series

Five basic models offer unique variety in appearance, lens style and mounting methods. Front mounting RDL-A and rear mounting RDL-B Series use standard midget flange base neon or incandescent lamps. Front or rear mounted RDL-C, D, and E Series use incandescent only. Removable lens for fast lamp replacement.

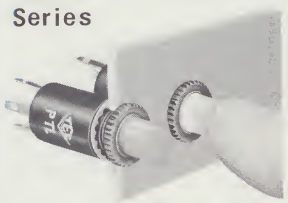
MINIATURE CARTRIDGE LITE

MCL Series

Economical, single unit construction with plastic lens-body in both neon or incandescent lamp models. Square or round lenses, internal series resistor. Lite clip mounts or plugs-in by means of front or back mounted cartridge holders.

REPLACEABLE LAMP INDICATOR WITH LAMP TEST FEATURE

PTL Series



Unique design permits testing indicator's lamp independent of external indicator circuit signals. Lens, which is depressed to test lamp, unscrews for easy replacement of neon or incandescent lamps.

MINIATURE DISPLAY LITE

MDL Series

An extremely versatile indicator that mounts from the rear with a single knurled nut and lock washer. A variety of optional features are available: spherical or flat top lens in 13 colors, wide range of permanently wired incandescent or neon lamps, internal current limiting resistor, two body colors and selection of terminals.

FRONT MOUNTING LITE

FML Series

Slip-in installation (no hardware required) of this incandescent or neon lamp indicator is important where rear panel access is limited. Flexible nylon collet type body slides into panel mounting hole from the front and is locked firmly in place by the slip-in lens. Lite is insulated from panel and can contain 1/4 w resistor.

TEC-LITE INSTANT REFERENCE TABLE

INDICATORS — SWITCH/INDICATORS — SWITCHES

SERIES	LAMP NEON	LAMP INCAN.	LAMP REPLAC.	TRANS. CONTROL LAMP	SWITCH ACTION OPTIONS	TERMINALS OPTIONS †	MOUNTING DIM. CENTER TO CENTER (INCHES)
ABL	X	X	X		SPDT-DB *	T, L, W	5/8''
ABS					SPDT-DB	T, L, W	5/8''
FML	X	X				.040 Pin, L	1/2''
LVB	X			X	SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L, W	5/8''
LVN	X			X		T, L, W, S	5/8''
MBL	X	X			SPST-NO-DB, SPST-NC-DB	T, L	9/16''
MBS					SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L	9/16''
MCL	X	X				.040 Pin, 2'' lead	1/2''
MDL	X	X				T, W, S	9/16''
MTL	X			X		T, L, W, S	5/8''
PTL	X	X	X		LAMP PRESS TEST	S	9/16''
RBL-1, 2	X	X	X		SPDT-SNAP ACTION	T	5/8''
RBL-3	X	X	X		SPST-NO-DB	T, L	9/16''
RBL-4	X	X	X		SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L, W	5/8''
RCL	X	X				.040 Pin	1/2''
RCLH-1						Solder Turret Lug	11/16''
RCLH-2						Solder Cup	1/2''
RDL-A	X	X	X			S	9/16''
RDL-B,C,D,E	X	X	X			S	11/16''
SBL	X	X			SPST-NO-DB	L	3/8''
SBS					SPST-NO-DB	L	3/8''
SDL	X	X				.018 Pin#, Wire lead	1/4''
SIL	X	X				L	3/8''
STL	X	X		X		L	3/8''
S3L		X				.032 Pin	3/8''
TBL	X			X	SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L, W	5/8''
TBL-20	X			X	SPST, (2) DPDT to 5 AMPS	T	.730
TIB		X	X	X	SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L, W	5/8''
TIL		X	X	X		T, L, W, S	5/8''
TML		X	X	X	SPST-NO-DB, SPST-NC-DB, SPDT-DB	T, L, W, S	5/8''

*DB = Double Break

† T = Taper Pin Receptacle
L = Turret Lug
W = Wire Wrap
S = Solder Lug/Taper Tab

Mating Connector Avaiable

SWITCH/INDICATORS

I-C COMPATIBLE: Virtually all models of Transistor Controlled Indicators shown on this page are available as M-Series — units designed to operate from the low level outputs of RTL, DTL and TTL I-C modules.

CUSTOM DESIGN: These cataloged devices can be custom designed to meet specific needs. TEC has 6000 special designs — electrical and mechanical — on file.

TRANSISTORIZED BUTTON-LITE
WITH NEON LAMP

TBL Series

Combined in a 9/16" diameter body are a momentary action push button switch and a neon indicator lite that is actuated by signals as low as 1.5 volts. SPST-NO-DB, SPST-NC-DB or SPDT-DB switch selections available.

Also available is the TBL-20 series with a rectangular body .850" x .725". Provides isolated momentary contact switch, either SPDT or DPDT action and current ratings to 5 amps. Self contained circuitry confines light voltage to panel simplifying design requirements.

MTL Series — Transistor Controlled Indicator Only

TRANSISTOR CONTROLLED BUTTON-LITE
WITH REPLACEABLE INCANDESCENT LAMP

TIB Series

Conserves panel space by combining indicator circuit with isolated momentary switch. Three basic switch options available: SPST-NO-DB, SPST-NC-DB or SPDT-DB. Lamp is internally switched on and off by signals as low as .3 ma. TIB Series uses a replaceable midget flange base incandescent lamp which confines high currents to panel area.

TIL Series — Transistor controlled indicator only.

TRANSISTORIZED LOW VOLTAGE NEON BUTTON-LITE

LVB Series

Internal circuitry generates high voltage AC to fire the neon lamp making the LVB Series ideal for use where high voltage is not desired or not available. Isolated SPST-NO-DB, SPST-NC-DB or SPDT-DB switch options. For discrete component circuitry only, Standard models operate from 6 to 28 volt power supply and can be controlled with signals as small as 2 volts.

LVN Series — Indicator function only.

ALTERNATE ACTION SWITCH

ABL Series
CONVENTIONAL INDICATOR WITH REPLACEABLE LAMP & SWITCH

ABS Series
BUTTON SWITCH ONLY

Double break switch controls two circuits... when one circuit is closed the other opens — mechanical memory holds this status until switch is actuated again (SPDT-DB). Both series are rated for loads to 100 ma at 115 VAC. ABL includes replaceable neon or incandescent lamp. Plugs into TAL Series for transistor controlled lamp.

REPLACEABLE LAMP BUTTON-LITES

RBL Series

Combination switch / indicator with replaceable neon or incandescent lamp. Three versions: RBL-1, snap-action SPDT momentary contact switch, dry circuits or currents to 1 amp; RBL-2, snap-action SPDT momentary contact switch, operates with high currents to 5 amps; RBL-3, snap action SPST-NO-DB momentary contact, 100 ma at 120 VAC; RBL-4, SPDT-DB or SPDT switch action, 100 ma at 115 VAC. Switch life exceeds 1 million operations at rated current.

MINIATURE BUTTON-LITE

MBL Series

Combines a permanently wired neon or incandescent lamp and isolated independent momentary contact switch... SPST-NO-DB or SPST-NC-DB options are available. Switch life exceeds 1 million operations at 100 ma at 115 VAC. Switch is activated by depressing the indicator's push-button lens.

MINIATURE BUTTON SWITCH

MBS Series

A compact, highly reliable momentary contact push-button switch, the MBS Series is available with SPST-NO-DB, SPST-NC-DB or SPDT-DB options: Switch contact rating is 100 ma at 115 VAC, non-inductive, with a switch life of one million operations at rated current.

LITE POWER SUPPLY

LITE POWER SUPPLY

LPS Series

Light, compact and inexpensive, the LPS Series is a solid state unregulated choke input supply which provides a high quality, highly reliable power source for transistorized and conventional neon indicators and readouts. Designed to provide supply and bias voltages it can be easily placed in any convenient location and will power up to 400 indicators.

I-C COMPATIBLE: Virtually all models of Transistor Controlled Readouts shown on this page are available as M-Series — units designed to operate from the low level outputs of RTL, DTL and TTL I-C modules.

DIGITAL & ALPHA READOUTS

TRANSISTORIZED DIGITAL READOUT WITH NIXIE® TUBE — COMPACT...VERSATILE...RELIABLE...TNR Series

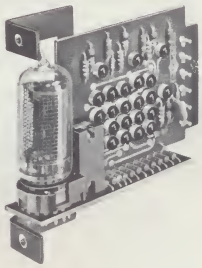
Digital and alpha readouts offer design latitude to fit your exact needs. All TNR Series models operate from decimal or binary coded decimal inputs. Numeral display is controlled by signals as low as 2 volts. Characters for all TNR Series models shown are .610" high, and the complete module mounts on 1" horizontal centers. TNR Series models are available to interface with RTL, TTL and DTL logic. Simplified design and assembly reduces cost.

TNR-10 & 30 Series

Perform the same functions as the TNR-40 & 50 Series but are designed for military requirements.

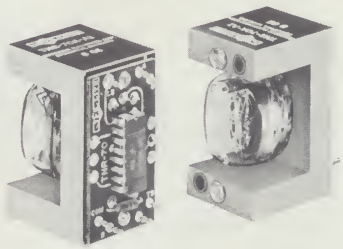
TNR-40 & 50 Series

Numeric elements of the neon tube are controlled by internal all transistorized circuitry. TNR-40; decimal input, decimal readout. TNR-50; B,C,D, input, digital readout.



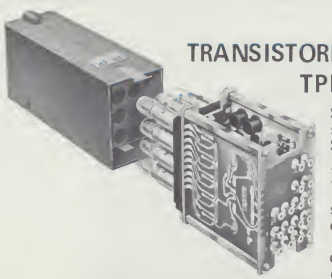
TNR-41 & 51 Series

Low cost readout using a side-viewing NIXIE tube. Duplicate circuitry and characteristics of TNR-40 & 50 Series. Unit measures 3" high x 13/16" wide, mounts on 13/16" centers.



TNR-70A & 70B Series

Ultracompact TNR-70 Series offers two logic level options plus four logic function options. Available with memory and/or decade counter. Mounts with just 2 screws — no separate nuts, bolts, lockwashers or standoffs required.

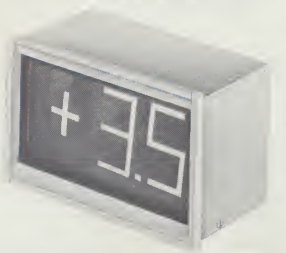


TRANSISTORIZED DISPLAY DRIVER TPD Series

Solid-state lamp control module designed for IEE Series 10 and IEE Series 120H high brightness projection readouts. Controls 6, 12 or 28 VDC incandescents from logic levels as low as 1 ma. Other lamp supply voltages can be accomodated on special order. Complete TPD Series Driver module forms an integral part of the IEE display. Type of IEE readout selected determines the type of signal control; types available are:

TPD-10 SERIES: Provides decimal readout from decimal input signals.
TPD-20 SERIES: Provides decimal readout from 4-wire binary coded input signals.
TPD-30 SERIES: Provides decimal readout from 8-wire binary coded input signals.

TRANSISTORIZED SEGMENTED READOUT TSR-70 Series

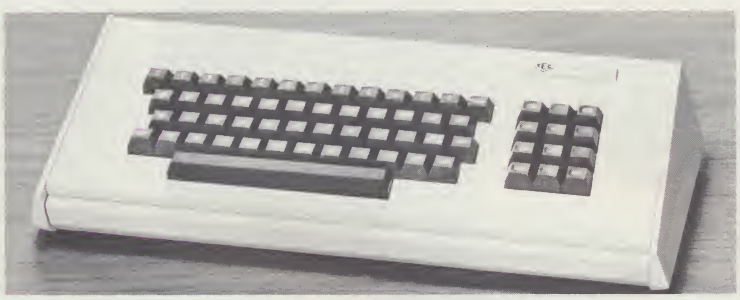


Viewed from any angle, TSR-70 Series offers a brighter, more readable digital display. Single plane viewing gives greater wide-angle visibility. Big 1" high characters operate at a high, steady level unaffected by ambient light.

I-C logic controls replaceable incandescent lamps and offers four logic functions. Available with memory and/or decade counter. Provides decimal readout from 10-wire or 8-wire B.C.D. input. Standard units offer displays 0 thru 9, plus, minus, and a decimal point. Other numerical sequences available.

Easily mounted, install as many as fifteen TSR Series Readouts as readily as a single unit. Mount individually or in rows within a multi-position bezel assembly. Approximate mounting dimensions are 1" centers horizontally and 2½" center vertically.

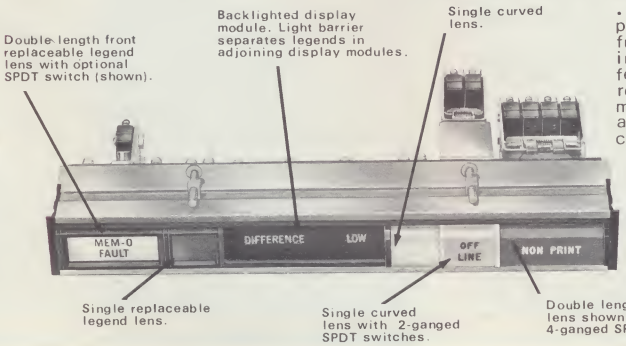
ELECTRONIC KEYBOARD SYSTEM



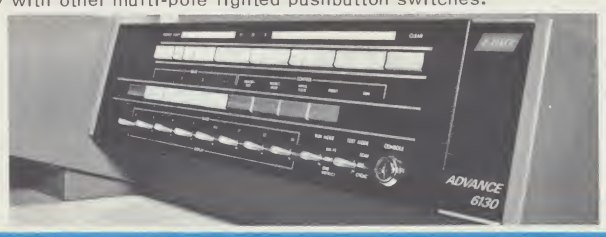
The system features a solid-state, bounce eliminating-interlock encoder actuated by TEC-LITE Keyboard Switches. Pulse and momentary action TEC Keyboard Switches duplicate the feel and travel of electric typewriter keys. Because of the elimination of mechanical linkages with their inherent noise; limited life, and maintenance problems, the electronic encoder offers greater reliability than conventional electromechanical encoders. The encoder can be easily adapted to virtually any application which requires the digital encoding of data.

TEC Electronic Keyboard Systems serve as input terminal units for EDP and industrial control systems and are capable of accommodating any code up to eight levels. Electronic Keyboard Systems are extremely adaptable and flexible. TEC has, for more than 2 years, successfully produced a large number of custom built keyboards that meet specific requirements in key arrangements, enclosure colors and electrical connections. By using standard TEC keyboard components the usual price penalties for special key arrangements are eliminated.

DATA-LINE DISPLAY



...Brings a totally new meaning to the word Versatility! Modular in-line design permits intermixing of message display, neon or incandescent indicator/switch functions. Function options may be arranged in any sequence on .700" centers in an extruded aluminum frame. The frame, available in lengths to nearly four feet, forms the front bezel and provides panel mounting hardware. All lamps are replaceable either from the front or the rear of the panel. From every aspect, mechanical or electrical, TEC-LITE DATA-LINE Display System is as versatile as your requirements. Price of DATA-LINE Display's switch indicator function compares favorably with other multi-pole lighted pushbutton switches.



TEC DISPLAY / CONTROL SPECIALISTS

TEC OFFERS:

FULL LINE OF PRODUCTS FROM A SINGLE SOURCE

TEC has a full line of display and control components . . . assemblies . . . systems. TEC can meet your requirements most efficiently by integrating several product types into one display/control assembly.

NEW PRODUCT DEVELOPMENT

At TEC, significant investment is made in research and development to assure continued leadership in information display techniques. At TEC's R & D Center in Tucson, Arizona and in the Minneapolis facility, advanced research is a continuing activity.

PRODUCTION CAPABILITY

Complete fabrication, assembly and Q.A. — in near white room environment — provides the capacity to produce orders of any complexity and volume.

EXPERIENCE

TEC's designers, engineers, Q.A., production and field sales people know display and control. TEC's people have many years experience in all phases of the electronics industry. TEC knows how to put products — systems — to work most effectively for you.

TEC

TEC is the originator, patentee and world's largest manufacturer of transistor controlled indicators. Since its formation in 1958, the company has been totally involved in the man-machine communications aspect of computers, control systems and peripheral equipment and serves the leading companies in these areas. TEC's product growth has kept pace with the industries it serves. Strong financial stability is maintained at all times. TEC is a customer oriented supplier.

In Minneapolis, more than 52,200 sq. feet of modern plant and office are used for the design and production of display and control products. This unusually clean facility approaches white room conditions: controlled atmosphere; white jackets; high level lighting; dust free terrazo floors — environment and organization that induces orderliness and precision in production.

HERE'S HOW TEC CAN HELP YOU:

- **REDUCE COST**
  TEC selects from inventory or designs the component, assembly or system that will give you maximum display effectiveness at minimum cost. Your display installation costs can be reduced also, because many of TEC's display and control products are completely assembled, pre-tested units ready to mount and connect.

- **IMPROVE RELIABILITY**
  Tried and proved designs using latest technology, rigid Q.A. standards and thorough pre-shipment testing give you reliable, long life products. I-C logic with accessable modular design simplifies routine maintenance procedures.

- **IMPROVE APPEARANCE — OPERATOR ACCURACY**
  TEC's industrial design consultants help coordinate displays and controls into your equipment to compliment appearance. Fast, accurate operator understanding and response result from human factored display designs.

- **REDUCE LEAD TIME**
  Working from your specifications or requirements, TEC will design and produce your display/control equipment in minimum time.

- **NEARLY 6000 CUSTOM DESIGNS**
  Many of TEC's display/control products are designed to meet special requirements. These designs are "on file", ready reference available to help fill your special needs promptly.

- **COMPONENTS...ASSEMBLIES..,SYSTEMS**
  Whatever your requirements — indicators to terminal systems — they may be met by using existing cataloged TEC products — those described briefly in this brochure — or TEC's in-depth engineering service may be applied to develop a variation of these products, or create a totally new product or system.

TEC . . . your complete source of information display and control devices . . . let us help you with your requirements. Contact your local TEC-Rep or write direct.

TEC LITE®

Transistor Electronics Corporation

TELEPHONE (612) 941-1100 | BOX 6191 MINNEAPOLIS, MINN. 55424 | TELETYPE 910-576-2860

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629-9-68K

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TEC LITE

Yes, I would like more information about
TEC's DATA-SCREEN Display Terminal.

☐ Have Systems Engineer Call ☐ Mail Information

APPLICATION INFORMATION

Desired number of displayable characters:
☐ 128 ☐ 512 ☐ 1000 ☐ Other _____

Terminals are to be:
☐ Stand Alone ☐ Clustered ☐ Both

Approximate number of each type of terminal:
Stand Alone _____ Clustered _____

Additional Information _____

_____

_____

Name _____ Title _____

Firm _____

Dept. or Division _____ Bldg. or Mail Sta. _____

Address _____ Phone _____

City _____ State _____ Zip _____

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